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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,480	04/01/2004	Wayne Errol Evans	TH2467 (US) HS:KNL	1211

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EXAMINER

COVINGTON, RAYMOND K

ART UNIT PAPER NUMBER

1625

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/816,480	Applicant(s) EVANS ET AL.	
	Examiner Thomas McKenzie	Art Unit 1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/17/05, 11/18/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12, 23 and 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12, 23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/17/05</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The term "an advanced stage of aging" in claim 1 is a relative term which renders the claim indefinite. The term is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 1 comprises the conditions that are not clearly defined. The claim, before reaching a cumulative olefine oxide production of 10,000 kmole of olefine oxide per m² of catalyst bed the reaction temperature is above 255 °C and the olefin content of the feed is in a certain range and the reaction temperature is maintained at the value as defined for at least a period which is sufficient to effect an olefin oxide production of at least 1000 kmole of olefin oxide per m² of catalyst bed.

These conditions, however, can be interpreted in several different ways, e.g. that (i) the reaction temperature is held always above 255 °C before the process (or the catalyst as possibly intended) has reached a cumulative olefin oxide production of 10,000 kmole of olefin oxide per m² of catalyst bed as it is literally defined in

condition (a); or (ii) the reaction temperature is held above 255 °C until at least 1 1,000 kmole of olefin oxide per m² of catalyst bed have been produced by the process (or by the catalyst as possibly intended), i.e. during the production of 10,000 plus at least 1000 kmole olefin oxide per m² of catalyst bed as defined in conditions (a) and (b); or (ii) the reaction temperature is held above 255 °C for a certain time span in which at least 1000 kmole olefin oxide per m² of catalyst bed have been produced before the process or possibly the catalyst has produced 10,000 kmole olefin oxide per m² of catalyst bed. From the wording of the claim it remains unclear when and how long the reaction temperature is above 255 °C in the claimed process (e.g. until at least 1000; 10,000; or 1 1,000 kmole olefin oxide per m² of catalyst bed have been produced by the process and/or the catalyst as possibly intended). Hence, amended claim 1 is not unambiguously defined and leaves the reader in doubt for what applicants intend as their invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

temperature and the olefin content of the feed is above 25 mol%. See column 22, lines 36-38, and column 20, lines 25-30: 30% ethylene.

Evans US 6372925 relates to a process for the vapour phase oxidation of ethylene to ethylene oxide, which process comprises reacting a feed of ethylene and oxygen in the presence of a silver/rhenium/rhenium-copromoter-containing catalyst by (i) operating at an initial operation phase wherein fresh catalyst is used, and (ii) operating at a further operation phase when the a cumulative ethylene oxide productions exceeds 10,000 kg ethylene oxide per m³ of catalyst (i.e. 227 kmole ethylene oxide per m³ of catalyst), wherein in said operation phase the ethylene concentration in the reaction mixture is increased See claims 1-11. The reaction temperature of the process is taught to range from 180 to 325 °C , column 2, lines 49-57). Furthermore, Evans US 6372925 exemplifies such processes with fresh catalyst at 254 and 255 OC and an olefin content of the feed greater than 25 mol% , examples comp. 2-4.

In view of the art as a whole the process as presently recited in the claims would have been obvious to one of ordinary skill in the art to optimize an otherwise known process using parameters taught within the art to achieve a claimed result which would not have been unexpected.

No claim is allowed.

Claims 1-10, 12, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 191983 in view of Lauritzen US 4766105 and Evans US 6372925.

GB 191983 relates to a process for the production of ethylene oxide, which process comprises reacting a feed comprising an olefin and oxygen in the presence of a silver-containing catalyst (cf. claims 1, 3, examples 1-3), wherein the reaction temperature is above 255 °C (cf. claim 5: 250-320 °C; example 1: 266 °C; examples 2, 3: 280 °C) and the olefin content of the feed is above 25 mole to , for example, 1: 90.5 vol %; examples 2, 3: 94 vol % relative to the total feed.

Lauritzen US 4766105 relates to an ethylene oxide catalyst comprising silver, a promoting amount of rhenium and a rhenium co-promoter such as tungsten, sulfur, and others. In this context, the document describes processes for the production of ethylene oxide, which processes comprise reacting a feed comprising an olefin and oxygen in the presence of said catalyst, wherein before the catalyst "has reached an advanced stage of ageing" the reaction temperature is above 255 °C. See, for example, the initial T_{40} Values of illustrative embodiment 6 in table 7. In combination with column 2, lines 50-54, wherein T_{40} is defined as the temperature at 40 mol% oxygen conversion in the reactor i.e. the reaction

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Covington whose telephone number is (571) 272-0681. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas McKenzie at telephone number (571) 272-0681.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Thomas McKenzie
SPE
Art Unit 1625


RKC